Bud's Copy

TITUSVILLE AMATEUR RADIO CLUB NEWSLETTER

MARCH, 2000

PRESIDENT'S CORNER

By Bud Hughes K4CWG

The FCC has established the Morse code speed of 5 WPM to qualify for either the General or the Extra class license. In addition the FCC has reduced the number of license classes from six down to three. Effective April 15, 2000 there will only be Technician, General and Extra class licenses.

If you do not care to upgrade from either the current Novice, technician Plus or Advanced you may continue to operate with the same privileges as you currently enjoy. You will be able to renew your license as Novice, Technician Plus or Advanced when your current license expires and continue to hold the same grade of license as you currently possess. There will be no new entries to the Novice, Technician Plus nor Advanced classes after April 15, 2000.

As to whether this action taken by the FCC is good, bad or indifferent depends entirely upon the person to whom you may ask. Based on the enormous upswing in the number of amateurs taking the exams to upgrade their class of license to General and Extra, then kudos to the FCC.

There are many amateurs who are eligible to upgrade to General class without further exams. One such example would be if you now hold the Technician class license and you took the exam for that license on or before 3/21/87, you will qualify for General class effective 4/15/2000.

Unless the ARRL can persuade the FCC to continue to retain the Technician Plus category in their database, it would behoove you to keep proof of your passing the 5 WPM code test. The proof could be either a copy of your Novice class license or a copy of your CSCE showing you passed the 5 WPM exam.

If you need help or if I can be of assistance to you please feel free to contact me.

If you would like to join the TARC group for the Thursday night dinner, please come and join us.

Hope to see you at our next TARC meeting on March 28 at 7:00 PM at the Jaycees building.

Until next time, best of 73's

CORRECTION

In the February newsletter we left off the name of KF4MXF Linda Lathrop as one of the judges of the Christmas boat parade. Linda, we apologize.

HAPPY BIRTHDAY

MARCH BIRTHDAYS

MAR. 04 AF4LD GARY COMMER
MAR. 06 KD4DOJ SKID SKIDMORE
MAR. 06 W4RH FRANK BUTLER, JR.
MAR. 08 WB4LOE LARRY SKIDMORE
MAR. 12 KF4BKY JOE HUSSON
MAR. 19 AB4P BILL MALLMAN
MAR. 19 KS4YH JOHN TOWERS
MAR. 20 KD4EYR JUNE ROLL
MAR. 23 WB4PXO JIM MORGAN
MAR 23 AC4KU AL SANFORD
MAR. 24 K4MVO STEPHANIE PHILLIPS
MAR. 27 AE4OJ DAVID GREENWALD
MAR. 29 W4REN JAN FERGUSON
MAR. 30 KC4TE GENE MANN
MAR. 31 KD4ITX NANCY MARSDEN

ANOTHER YEAR ANOTHER YUKON QUEST ANOTHER NIGHTMARE AT ANGEL CREEK

Well, it's that time of year again when the members of the Arctic Amateur Radio Club pick up all their radios and warm clothes and head for the checkpoints along the trail of the Yukon Quest Sled Dog Race.

This year Tina (KL0DD) and I (KL0AN) went back out to our usual place of Angel Creek which is about 100 miles from the start in Fairbanks, AK. We took another couple with us because we won't be able to help out next year due to a move by the military.

Angel Creek has always been a real trouble spot for transmitting back to Fairbanks and this year was no different. I went armed with my HTX-242 mobile and a 3 element cubicle quad. I took 6 pieces of ¾" PVC at 5 foot in length with a bunch of joints so I could erect a simple mast. We got it up to 25 feet with three people holding on to the guy ropes and that durn thing bent right over until the antenna touched the ground.. That really says something about PVC. It was -20 degrees out there and that stuff didn't break. So after another attempt, we got the antenna up and checked in with headquarters and all was well for the time being.

I went over to the check point shack to check on Tina and make sure she was on the right frequencies (we ran simplex at the checkpoint) so we could communicate back and forth. Well, now here's where it gets fun. I went back to my truck and my future replacement told me something was wrong with my radio. It had something to do with him dropping the microphone into a cup full of soda. I spend the next three hours with a maglite between my teeth carefully scraping the coke residue from the circuit board in the microphone. Finally, after getting it all working properly, we found out the repeater link into our main repeater had been turned off by the person that was running the link for us because it was making a lot of noise.

Anyway, after a couple more hours of troubleshooting with various radios and such, I made a phone call to the headquarters and found out the problem and got it straightened out.

The only other problems we had were the propagation changing over time in the remote valley we were in. At one point I had my antenna pointed at the side of a ridge to bounce the signal off into Fairbanks. Later I had to move it over 30 degrees to the North to maintain contact again.

The dog teams and the mushers were a wonderful sight as always. To see these dogs come into a checkpoint after running for 8 hours straight is truly an amazing sight. They are true athletes that's for sure.

The Northern Lights (Aurora Borealis as called by some) were very spectacular as they always seem to be during that time of year and I saw several people just looking up in total amazement at the beauty from the heavens.

All but 2 checkpoints on the US side of the border were handled with the 2 meter repeater system we have set up here in Alaska. The Arctic Amateur Radio Club Repeater network covers over 60,000 square miles throughout the interior with links coming this summer that will take us all the way to Anchorage (375 miles away with a really big mountain between us a.k.a. Mt. McKinley);

If you every happen to be up this way, be sure and check out the repeater network. It's absolutely a work of art and if you happen to come up around the 2nd week in February and want to try some REAL field conditions, make sure and drop a line to the club and see how they can use you. It's a great experience that I guarantee you'll never forget.

73's and happy dxing. *Paul Jordan, KL0AN, Fairbanks, AK*

ED. NOTE: Paul's parents, Jo KE4AEB and Kay KE4MXF tell me that Paul is being transferred to North Dakota. Lets hope he gets a chance to come to Florida and get warm in between assignments.

LETTER TO THE EDITOR

Dear Becky,

I wish to thank the Titusville Amateur Radio Club for providing, and the club member Volunteer Examiners for giving me the opportunity to upgrade my amateur operator license.

Although the exam correction and grading process of my exam evolved into a unique procedure involving three coordinators and one shivering applicant, all turned out splendidly for me.

Again, my genuine THANKS to all whom volunteered their time and effort for my benefit.

Sincerely,

KF4JI Carl Christian

EXCERPTS FROM "IT SEEMS TO US..." MARCH 2000 QST By David Sumner, K1ZZ

Do you remember the last time you took an FCC exam?

I do - but just barely. The year was 1965. The Amateur Extra Class license carried no special privileges at the time, but a nerdy teenager could see the handwriting on the wall and it seemed like a good idea to get the Extra exam out of the way before the rush.

The written exam had 100 questions, including ten that required the applicant to draw diagrams. The Morse receiving exam required one minute of solid copy out of five at 20 words per minute. There was also a sending exam.

Some would have you believe that because I passed the Extra in 1965, that makes me a better ham than someone who did it later - or who will do it after April 15.

Nonsense. Let's pretend that someone knew just enough to pass the Extra exam 35 years ago and hasn't learned anything since. Today they would know nothing about spread spectrum, packet radio, slow-scan television, or satellites. For that matter, they would know nothing about repeaters or semiconductors! They would recognize the schematic symbol for a vacuum-tube rectifier but not for a solid-state rectifier. They would not know the frequency limits for the amateur bands at 10, 18, 24, and 902 MHz; those bands did not exist until after 1979. Unlike any recently licensed Technician, they would know nothing about RF exposure limits.

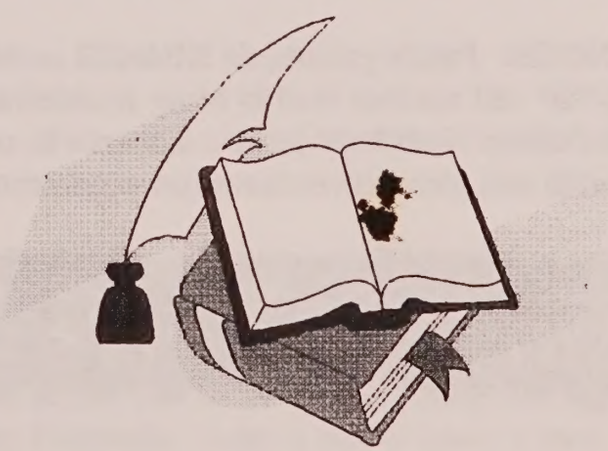
"Oh, but in the 'good old days' the question pools weren't published, so there was no way to know what would be on the exam." Not exactly. Perhaps we should republish a '60s vintage *ARRL License Manual* to put that particular misconception to rest. I don't remember everything that was on the 1965 Extra exam, but from looking at the 21 pages of Extra Class study material contained in the *License Manual* of the time-consisting of 240 sample questions with thumbnail explanations-I can tell you that both the first and the last sample questions were on it verbatim. Not only that, but the book gave the exact answer to each.

The point is *not* that yesteryear's Extra exam was easy. Unless you were an engineer, it wasn't. For example, there were questions about television and radar that were well beyond the scope of what most amateurs had any reason to know. There were questions about single sideband long before SSB was popular. The March 1952 *QST* editorial said the Extra Class exam was on a par with the first-class commercial, and no doubt it was. Still, it was possible to pass on the strength of a few hours' study and without an in-depth understanding of the subject matter.

The real point is twofold. First, the fact that someone - I or anyone else - passed an FCC exam a long time ago says nothing about their ability today to fulfill the basis and purpose of Amateur Radio. Earning a license is not the end of the road. It's just the beginning. The measure of the ham is what one *does* with the license, be it Novice or Extra.

Second, today's exams are easily on a par with yesterday's, as will be tomorrow's. Today's advanced exam is at least as challenging as the old Extra written exam and is more difficult than the present one. After April 15, the new Extra - which will be drawn from a combined Advanced/Extra pool - will be a challenge worthy of anyone aspiring to the top rung on the licensing ladder. Yet, it will have "only" 50 questions, but they will be drawn from a pool that is broader in scope than any previous FCC amateur exam and the passing grade will be the same.

But if you pass, what then? Earning an Extra Class license in 1952, when it was first offered, did not mark the end of any worthwhile amateur's ascension of the learning curve. It didn't in 1965. It doesn't now, and it won't after April 15. We owe it to ourselves to extend our self-education beyond the licensing requirements of the moment, whatever they may be.



SOLAR-POWER TIPS
From Hints & Kinks
3/2000 QST

I've been running things from solar power for years - my shack, Field Day site, RV, campsites and so on. Many of these are mobile systems, from pocketsize QRP solar panels with 1.2 Ah batteries to a typical Field Day system with a couple hundred watts of solar panels and 400 Ah of batteries. In my shack and my RV, controllers (Trace C40s) are used for "set it and forget it" ease, but at portable sites I keep it really simple and use nothing but a voltmeter.

BATTERY CHARGING:
When you attach a solar module to a battery and check the system voltage, the voltage usually approximates that of the battery. Most good solar modules are rated 17.5 V (or more) and have open-circuit voltages of around 22 V. When they're connected to a reasonably sized battery (say 2 Ah, or more, of battery per watt of solar panel) it takes a long time for the battery voltage to reach harmful levels. Check the specifications on the battery and radio, but up to 15 V is usually fine and sometimes necessary. If you are using the system to concurrently power your equipment, you'll probably never see a voltage that high. If you do, just disconnect the solar module for a while.

If the modules come with a diode, you can leave that in place and not worry about discharging at night. If there's no diode, just disconnect the modules when there's no sun on them. Remember, however, that they do work (but at reduced current) even on cloudy days.

STORAGE BATTERIES:
Car batteries are not good storage devices for solar systems. They are designed to deliver large amounts of current for short periods and then recharge immediately. A good solar storage battery (deep-cycle battery) is designed to deliver a relatively small amount of current for a long period and be discharged somewhat before being recharged. Neither battery will last long in the wrong environment.

If you want to put together a 14 V system, a reasonable battery pair would be the Trojan T-500 (8 V, 190A) and T-890 (6 V, 165 A). Keep the ampere-hour ratings of the batteries equal if possible, so you don't cook the smaller battery while the larger one is still charging. Keep an eye on the electrolyte levels in these mismatched systems, and select your solar modules for high voltage ratings so they are likely to charge to 14-V battery under most (cloudy) conditions.

SOLAR MODULES:
Solar-module output voltage varies with temperature, as do battery characteristics. A typical temperature coefficient would be around -0.38% per °C from a 25°C nominal cell temperature: On a very hot day, your 18-V module could struggle to charge a 12-V battery. Remember you need about 15 V for a good charge, more to equalize, and there are diode and cabling losses to consider (which are significant in a 12-V system). What about using 16-V modules on a 14-V system? Forget about it. That voltage won't even do a good job on a 12-V system under all conditions.

Good solar modules are generally made up of 36 cells in a 12-cell series/parallel combination: they put out between 17.5 and 19 V. There are also 30-cell modules that put out between 15 and 16 V. These were designed for use without a controller. If an appropriately sized battery is used with these 16-V systems, it usually won't overcharge. No guarantees; on a cold, bright day the module voltage output can be high and the battery capacity low. That combination makes an overcharge likely. On the other hand, the module voltage on a hot day will probably be insufficient to charge the battery well. (continued on page 6)

ABELL'S ANECDOTES

By Pike W4EPU

It happened several years ago, back when CB radio first became a popular means of communications among highway travelers.

It was a military family of five. Mother, father and three children ages 4, 6 and 8.

The father, who was stationed on the west coast, was transferred to a base in the New York City area. He went ahead to his new assignment, leaving his wife and children behind until he could arrange housing and all.

After he notified her that everything was ready, she and the children traveled across country by car. After a few hours on the road, the stopped for lunch at a truck stop restaurant. During lunch she engaged in a conversation with some truck drivers sitting at an adjacent table. She told them about her planned trip and even gave them a general idea of the route she would be taking.

On the third day of their journey, somewhere in Ohio, they left the main highway and traveled to a nearby town to visit friends and stayed there for several days.

They finally left their friends and continued their journey. They had only traveled a few miles when a tractor trailer truck approached close behind them. He then dropped back and stayed a safe distance several hundred feet behind. The lady could not help but notice that the trucker was obviously following her. For that she was somewhat concerned. The truck kept pace with her for several miles until she stopped at a rest area. The truck likewise stopped. The truck driver, in fact, approached her in the parking lot and said to her. "Ma'am, you had us all worried. Where have you been? Truckers along this route reported you missing several days ago. We have been looking for you everywhere ever since....."

Only then did she realize that truck drivers along the route were actually escorting her across country, making sure she and her children had a safe and trouble free journey. They kept each other informed of her welfare and whereabouts all along the way by CB radio communications. 73s es 88s.

Many thanks and way-to-go's to Pat-KE4LTY, Clara-KE4YQL, John-KE4ZPA, Dan KE4MWY and Dave-NB5EM on the side, for providing support communications for the 'Run for Life' group of runners who passed through Titusville on Thursday, Feb. 24. They ran from Homestead to St. Augustine, as they do annually, raising money for troubled and unwed mothers. We talked them in from the vicinity of Port St. John to Titusville for a reception committee who were waiting for them in St. Teresa's church yard. Pike W4EPU

SOLAR (Continued from page 5)

Some amorphous thin-film modules don't appear to have "cells" at all. Just look at the "operating" or "rated" voltages to see how much electrical pressure you have available. If you measure module voltage, do so under load. Open-circuit voltages don't tell you much and are almost always over 20 V. *JCSmith,K0HPS, Walnut Creek, CA*

DEEP THOUGHTS

Have you ever noticed? Anybody going slower than you is an idiot, and anyone going faster than you is a maniac.

TREASURERS REPORT

By Becky Lee, KF4HTB

Balance forward from 1999	$4333.03
Deposits Year to Date	1018.00
TOTAL INCOME	**$5351.03**
Expenditures	706.04
BALANCE AS AT 2/29/00	**$4644.99**

FEBRUARY MINUTES

By Becky, KF4HTB

After the Pledge of Allegiance, moment of silence and birthday recognition, KG4CEB Anthony who is replacing AE4LE Ralph as the new North Brevard Emergency Command coordinator, told the club that sometime in April there will be a hurricane response drill, and in May a hurricane recovery drill. Details will follow.

K4MVO Stephanie, the newly elected President of BEARS urged everyone to participate in the tornado watch and warning drill.

After the break Wes AF4N reviewed the club repeaters and explained how to take advantage of their functions. He gave these guidelines for repeater use:

1st - urgent traffic
2nd - mobile
3rd - general use

He also explained in detail how to use the auto patch. Contact AC4JX Dave to obtain a speed dial number. Wes prom[illegible]d to upgrade and issue a new auto patch use card.

There were lots of questions put to Wes by the members - not only about the items he covered, but other repeater functions as well, and he promised to cover those topics at a later meeting.

Club Officers

President: Bud Hughes, K4CWG. 267-3450
V.Pres: Ozzie Osband, N4SCY. 407-LIFTOFF
Sec/Treas: Becky Lee, KF4HTB, 267-9375

Elected Board Members

Ken Denman, KD4HNW. 269-5711
John Renninger, KE4ZPA. 267-9431
Grant Hahne, KF4IGK. 269-6484
Sherry Hughes, KU4ZO

Repeater Custodian Board Members

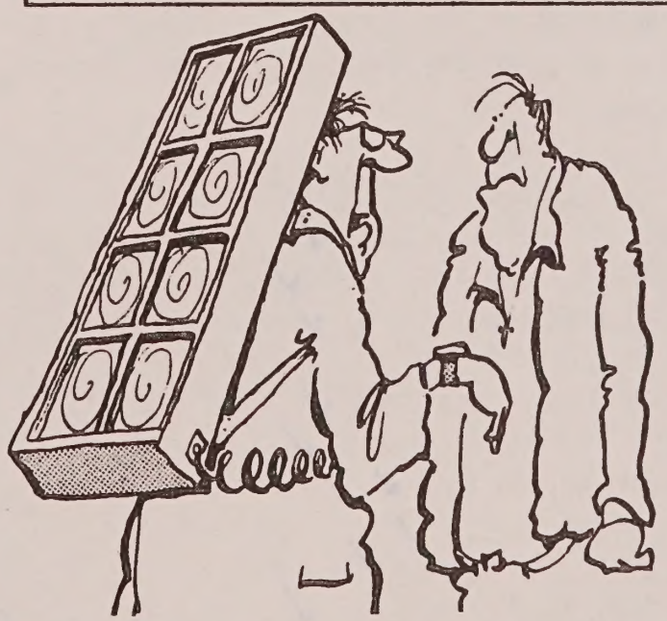
Les Griner, K4SJC (146.91) 267-1565
Warren Murray, W4CEL (146.97) 638-5476
Dave McLean, WB4SIG (444.15) 267-6181
Larry Carr, WB9MFJ (Packet-Rose Node) 268-4114

Club Information

Meetings: Monthly on 4th Tuesday at 1900 hrs. at Jaycee Building

Newsletter Editors: KF4HTB Becky Lee
K4EOS Clyde Lee

Nets: **VIP**-Thursdays at 1000 hrs. 146.910
Friendship-Thursdays at 1830 hrs. 146.910
Mosquito-Wednesdays at 1900 hrs. 28.333
Traders-Fridays at 2000 hrs 146.910



"How many guys d'you know with a solar- powered wristwatch?"

TITUSVILLE AMATEUR RADIO CLUB
P. O. BOX 73
TITUSVILLE FL 32781-0073

March 2000

MEMBERSHIP UPDATE
Total membership: 228 (156 regular, 54 family, 12 honorary, 6 other)

NEW MEMBERS:
KR4WB CHARLIE EATON
KG4FXR FRANKIE ERSKINE
KG4DSG MIKE WOLFORD

RENEWALS:
KF4AOW BILLY DAMPIER
KE4WJV TERRY DAMPIER
AE4CB DAVID HURST
W4EPU PIKE ABELL
KE4YQL CLARA ABELL
KC4HIO RICHARD SWEATT
KC4HIQ SHIRLEY SWEATT
~~KR4HR~~ GEORGE SMITH
5KR4HS

OK Bud 12/13/00

KD4JBL WILLIE WILLIAMS
KE4MXG CARL LINEBAUGH
KE5MXH MARILYN LINEBAUGH
KF4QML KEVIN ZIMMERMAN
KC4RUF THOMAS RAC
KC4TE GENE MANN
AF4W CHARLES SUMMERS
K4WSE JOHN WOOD

HAMFESTS:

Mar 4/5	New Port Ric[illegible]
Mar 11	Englewood
Mar 11	Sebring
Mar 18	Stewart